**CGIAR Research Program on**
**Climate Change, Agriculture and Food Security (CCAFS)**

# DDS Introduction
## *Video Transcript*

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## Introduction

During the lifetime of a research project there is a need for a shared storage area for project data and documentation. This can be easily turned into a public archive at the end of the project. We have coined the phrase "Data & Document Store" or DDS to refer to such a shared storage area.

## History

Before the advent of the Internet and computer networks, researchers would store their data and documents on standalone PCs. This worked fine for small projects with one researcher, but as projects became larger and teams developed, you often had the situation with each team member holding some but not all of the documents and data for the project. You often ended up with duplication and various copies of files with no one really knowing which was the most up to date. In short there was a mess and archiving at the end of the project was just too daunting a task so wasn't done. Sadly some still work like this.

## What is a DDS?

A DDS is a central storage area for project data and documentation and the rules that enable a team to use it effectively. So instead of the data and documentation being divided among the researchers and no one really being sure what is where and which is the most up to date, there are agreements and electronic spaces created so as to ensure the data and documents relating to the project are up to date, complete and available to those who should have access. This doesn't stop a researcher taking a copy of part of the data to work on separately, as long as they know that any updates must be made to according to the rules and in the agreed sites where.

The responsibility for negotiating and setting the rules for the DDS falls on to the person with overall responsibility for the project, probably the principal investigator. The responsibility of implementing the DDS is often delegated to the data manager.

## Access to the DDS

Many data storage models can be used. A decentralised system where every person on the team keeps files but each person deposits files into a single place for safekeeping and as a depository of the most up to date version of all data and documents. This has the advantage of freedom but the major disadvantage that ensuring completeness and up-to-date documents is very difficult.

With current technology a centralised system is quite appealing because it makes it easy to ensure completeness and up-to-date documents without much need for coordination of people. One disadvantage to a central store to which everyone has access is that it can easily become a dump, and dumps are a nightmare to sort out. Think back to times when you've attempted to tidy your desk or your filing cabinet and imagine how even more frustrating this could be when everyone was dumping paper on it.

To help avoid a dump you might consider appointing someone as the "custodian" of the DDS. Data and documents go to and from the DDS via this person. An alternative would be to give everyone read access but only give write access to the custodian.

## Where to store your DDS

Where you store your DDS depends on the resources and local skills you have available. The simplest solution is to have a shared network drive to which all team members have access. Another option is to use a web-based DDS, either creating a web site that contains all the project data and documents. For example, INNOMIP, a project that did research of crop pests in Ecuador, Peru and Bolivia, set up a custom-made a web server to store and view a series of folders and their contents.

Another option is to use something like Dropbox. This is a service that allows you to store and access your files from anywhere and to share them with anyone you choose. Dropbox is free for up to 2Gb but you would pay for anything more than that.

If you have a well-organised DDS throughout your project, creating a data archive for the project is relatively straight-forward. An interesting option to archive data and make it publically available is Dataverse which is a service housed at Harvard University.

With the current pace of change in the development of technology, by the time we are releasing this document, the technologies mentioned are common place and new ones are appearing. What is important is to be aware the establishment of a DDS is of great importance for a research project and the problem is not about choosing a technology to store information but making the managerial decisions that will make use of the best technology available to help achieving good management of the documents and data of a research project.

## Summary

The data and document store is a system to help you keep all your project files together in a central location. A well-organised DDS means that team members can always access the latest documents and data and data integrity is preserved. Archiving at the end of the project is made easier and quicker.

But remember, there is no special software involved and there is certainly no magic wand to organise your files. As a team you must decide on the structure of your DDS and ensure it becomes a useful resource and not just a file dump.

# Appendix I – CCAFS Data Management Support Pack

This document is part of the CCAFS Data Management Support Pack produced by the Statistical Services Centre, University of Reading, UK. The following materials are available in the pack:

0. Data Management Strategy
    a. CCAFS Data Management Strategy
1. Research Protocols
    a. Writing Research Protocols – a statistical perspective
    b. Preparation of Research Protocols – Good Practice Case Study
    c. What is a Research Protocol, and how to use one (Video & Transcript)
    d. Details of what a Research Protocol should contain (Video & Transcript)
2. Data Management Policies & Plans
    a. Creating a Data Management Plan
    b. Data Management Plan (Video & Transcript)
    c. Example Data Management Activity Plan
    d. Example Consent Form
3. Budgeting & Planning
    a. Budgeting & Planning for Data Management
    b. ToR Data Support Staff
    c. Budgeting & Planning (Video & Transcript)
4. Data Ownership
    a. Data Ownership and Authorship
    b. Template – Data Ownership Agreement
    c. CCAFS Data Ownership & Sharing Agreement
    d. Data Ownership & Authorship (Video & Transcript)
5. Data & Document Storage
    a. Creating and Using a DDS
    b. DDS Introduction – (Video & Transcript)
    c. DDS Organisation – (Video & Transcript)
    d. DDS Ownership – (Video & Transcript)
    e. Introduction to Dropbox – (Video & Transcript)
6. Archiving & Sharing
    a. Archiving & Sharing Data
    b. Data and Documents to Submit for Archiving – a checklist
    c. MetaData
    d. Archiving & Sharing (Video & Transcript)
    e. Metadata (Video & Transcript)
    f. CCAFS HBS Questionnaire
    g. CCAFS HHS Code Book
    h. CCAFS Training Manual for Field Supervisors

7. CCAFS Data Portals
    a. Portals for CCAFS Outputs
    b. AgTrials Summary
    c. CCAFS-Climate Summary
    d. DSpace Introduction
    e. Introduction to Dataverse (Video & Transcript)
    f. Creating a Dataverse (Video & Transcript)
    g. Dataverse Study Catalogue
    h. CCAFS Dataverse (Video & Transcript)
8. Data Quality & Organisation
    a. Data Quality Assurance
    b. Guidance for handling different types of Data
    c. Transition from Raw to Primary Data
    d. Data Quality Assurance (Video & Transcript)
    e. Guidance for handling different types of data (Video & Transcript)
    f. Transition from Raw to Primary Data (Video & Transcript)